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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,311

06/28/2004

David Arditti Modiano

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EXAMINER

YALEW, FIKREMARIAM A

ART UNIT

PAPER NUMBER

2436

NOTIFICATION DATE

DELIVERY MODE

05/08/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/500,311	Applicant(s) ARDITTI MODIANO ET AL.	
	Examiner Fikremariam Yalew	Art Unit 2436	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,21,23-36 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,21,23-36 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/24/2009 has been entered.
2. Claims 19,33,39 have been amended. Claims 1-18 were previously canceled. Claims 19-,21,23-36,39 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19,21,23-36,39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins et al (hereinafter referred as Hopkins) US Patent 7,093,133 B2 in view of Aoki(US Patent No 6,530,020 B1)
5. As per claim 19: Hopkins disclose a group signature device for providing a message (m) accompanied a group by a group signature (S) comprising means storing personalized data(z, Kz) identifying an individual member(M) of a group(G)(See Fig 2 and col. 6 lines 38-56 and col. 6 lines 9-22); encryption means(B3)for producing an encrypted text(C)(See col. 6 lines 61-63

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and col. 8 lines 23-30), intended to be associated with said message (m), using said personalized data (z, Kz) (See col. 6 lines 38-63 and col. 8 lines 23-30); signing means (B6) for producing the group signature (S) with a private signature key (SK) common to all group members using the message to be signed (m) and said encrypted text (C) (See Fig 7 step 20 and col. 5 lines 23-35); and means for outputting the message (m) and the group signature (S) to a checker, such that the checker, upon receiving the message accompanied by the group signature, is able to verify that message (m) is associated with the group (G) based on the group signature (S), with the identify of the member (M) of the group (G) remaining anonymous the checker (See col. 2 lines 52-57 and col. 5 lines 36-56).

However Aoki teaches an encrypted text (c) produced using the personalized data (z, Kz) of one said individual member (M) only (See Fig 8 step S106 (i.e., **produce PMi(SG)** and col. 3 lines 2-19 (**PMi specific to members Mi**)).

Therefore it would have been obvious to one having ordinary skill in the art at that time the invention was made to employ the teaching method of Aoki within Hopkins method in order to provide a signature system capable of signing by an arbitrary member belonging to a specific group and also capable of confirming that a signed document is actually signed by the member belonging to the specific group. (See Aoki col. 2 lines 57-60)

6. As per claim 21: the combination of Hopkins and Aoki disclose a group signature device further comprising means (B5) for combining the message (m) to be signed and the encrypted text (C) associated with said message (m) in the form of a concatenation of the message (m) with the encrypted text (C) (See Hopkins col. 6 lines 61-63 and col. 8 lines 23-30 and Fig 7 steps 100, 20).

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7. As per claim 23: the combination of Hopkins and Aoki disclose a group signature device wherein said personalized data is an identifier (z) personal to the member (M), said means for storing further includes an encryption key (K) common to all members of the group (G), and encryption means (B3) produces said encrypted text(C) using the identifier (z) and said encryption key (K) (See Hopkins col. 5 lines 18-35 and col. 10 lines 11-38).

8. As per claim 24: the combination of Hopkins and Aoki disclose a group signature device in which encryption means (B3) produces said encrypted text (C) using identifier (z) and a random number (r)(See Hopkins col. 7 lines 31-38 and col. 10 lines 1-10).

9. As per claim 25: the combination of Hopkins and Aoki disclose a group signature device wherein said personalized data is a diversified encryption key (Kz) specific to each member (M) of the group (G), and encryption means (B3) produces said encrypted text (C) using at least one data and said diversified encryption key (Kz) (See Hopkins col. 5 lines 18-35 and col. 10 lines 11-38).

10. As per claim 26: the combination of Hopkins and Aoki disclose a group signature device wherein said data includes a random number(r) (See Hopkins See col. 7 lines 31-38 and col. 10 lines 1-10).

11. As per claim 27: the combination Hopkins and Aoki disclose a group signature device wherein the encryption means (B3) uses a secret key encryption algorithm (K) (See Hopkins col.10 lines 26-38).

12. As per claim 28: the combination of Hopkins and Aoki disclose a group signature device wherein the encryption means (B3) uses one of the Rivest, Shamir, Adleman or Advanced Encryption Standard (AES) public encryption algorithms (See Hopkins 10 lines col. 26-38).

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13. As per claim 29: the combination of Hopkins and Aoki disclose a group signature device wherein the sign means (sig-B6) uses a private key signature algorithm (SK) (See Hopkins 10 lines col. 26-38).

14. As per claim 30: the combination of Hopkins and Aoki disclose a group signature device which the private key signature algorithm is of Rivest, Shamir, and Adleman (RSA) type. (See Hopkins col. 10 lines 26-38).

15. As per claim 31: the combination of Hopkins and Aoki disclose a group signature device in which said group signature device is a portable communicating device (26) (See Hopkins col. 6 lines 9-18).

16. As per claim 32: the combination of Hopkins and Aoki disclose a group signature device in which said portable communicating device is a smart card (26) (See Hopkins col. 6 lines 9-18).

17. As per claim 33: Hopkins discloses a method for secure communication of a message (m) sent by an individual a member (M) of a group (G) using a group a signature (S) the method comprising producing the group signature (S) of the message (m) by signing, with a private signature key (SK) common to all group members (M), a set including the message (m) and encrypted text(C) produced by using a personalized data (Z, Kz)(See col. 5 lines 18-35 and col. 10 lines 11-38); and outputting the message(m) along with the group signature (S)(See Fig 7 step 20)

Hopkins does not explicitly teach an encrypted text(c) produced using the personalized data (z, Kz) one of said individual member (M) only.

However Aoki teaches an encrypted text(c) produced using the personalized data (z, Kz) of one said individual member (M) only(See Fig 8 step S106(i.e., **produce PMi(SG)** and col. 3 lines 2-19(**PMi specific to members Mi**).

Therefore it would have been obvious to one having ordinary skill in the art at that time the invention was made to employ the teaching method of Aoki within Hopkins method in order to provide a signature system capable of signing by an arbitrary member belonging to a specific group and also capable of confirming that a signed document is actually signed by the member belonging to the specific group. (See Aoki col.2 lines 57-60)

18. As per claim 34: the combination of Hopkins and Aoki disclose the method further comprising using a public key (PK) corresponding to said private signature key (SK), that the message (m) is associated with the group (G) based on the group signature (S), without identifying the individual member (M) of the group (G) (See Hopkins col. 2 lines 53-57 and col. 5 lines 48-56)

19. As per claim 35: the combination of Hopkins and Aoki disclose the method further comprising the steps of: decrypting the encrypted text (C) thus obtaining the personalized data (z, Kz) (See Aoki Fig 8 step S106 and col. 3 lines 2-19; and identifying the member (M) of the group (G) based on said personalized data (z, Kz) (See Aoki Fig 8 step S106 and col. 3 lines 2-19).

20. As per claim 36: the combination of Hopkins and Aoki disclose the method further comprising producing a private signature key(SK) common to all members of group(G); producing personalized data (z; Kz) identifying the member (M) accepted into group (G)(See Fig 2 and col. 6 lines 38-56 and col. 6 lines 9-22); and registering said personalized data (z, Kz)

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with the private signature key(SK) in an electronic device personalized to said member (M) of the group (G)(See Hopkins Fig 2 and col. 6 lines 38-56 and col. 6 lines 9-22)

21. As per claim 39: Hopkins discloses a group signature system for ensuring a secure communication of a message (m) sent by individual a member (M) of a group (G) using a group signature (S), said group signature system comprising; an electronic device configured to store a personalized data (z, Kz) identifying the individual member (M) of the group (G)(See Fig 2 and col. 6 lines 38-56 and col. 6 lines 9-22), to produce the group signature (S) with a private key (SK) common to all group members using the message (m) and said encrypted text(C) and to output the message(m) and the group signature(S)(See Fig 7 step 20 and col. 5 lines 23-35); a checker that receives that receives the message (m) accompanied by the group signature (S) output from the electronic device, said checker being configured to verify that the message (m) is associated with the group signature (G) based on the group signature(S), the identity of the member (M) remaining anonymous to the checker(See col. 2 lines 52-57 and col. 5 lines 36-56); and a trusted authority configured to identify the member(M) of the group(See Fig 1 step 14)

However Aoki teaches one said individual member (M) only (See Fig 8 step S106 (i.e., **produce PMi (SG)** and col. 3 lines 2-19(**PMi specific to members Mi**)).

Therefore it would have been obvious to one having ordinary skill in the art at that time the invention was made to employ the teaching method of Aoki within Hopkins method in order to provide a signature system capable of signing by an arbitrary member belonging to a specific group and also capable of confirming that a signed document is actually signed by the member belonging to the specific group. (See Aoki col.2 lines 57-60)

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fikremariam Yalew whose telephone number is 5712723852. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moazzami Nasser can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2436
05/04/2009

/Nasser G Moazzami/
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2436